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ABSTRACT

Faced with concerns that students in the American educational system are failing to learn critical thinking, problem solving, and reasoning skills, and do not have the ability to apply these skills to real-world situations, educators and psychologists are researching methods of improving student learning and assessing student performance. In order to acquire accurate and useful information about student performance, classroom teachers have moved from traditional summative evaluation methods toward a formative method of assessment; teachers now have the role of teacher-researcher. This paper focuses on a systematic method of developing an authentic assessment instrument that incorporates a three-phase question: (1) What is to be assessed?; (2) How is it to be measured?; and (3) How does one observe and interpret verbal and non-verbal messages or data? In the first phase, teachers identify the purpose of assessment, recognize the uniqueness of the learners, and ensure that they possess a knowledge base in the relevant subject matter. In the second phase, teachers formulate learning outcomes and the criteria and standards that will be applied to them. In the third phase, teachers train themselves to play the role of objective observer. As teachers strengthen their observational skills and recognize their roles as teacher-researchers, they will experience an increase in confidence and professionalism, and there will be a direct positive effect on daily instructional and social classroom activities. (Contains 20 references.) (SWC)

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Title:

The Impact of Qualitative Observational Methodology on the Authentic Assessment Process

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THE IMPACT OF QUALITATIVE OBSERVATIONAL METHODOLOGY ON THE AUTHENTIC ASSESSMENT PROCESS

Introduction

What is taught, *how* it is taught, and *how* it is assessed are critical issues within the educational community today. The concerns that students in our American educational system are failing to learn critical thinking, problem-solving, and reasoning skills, and do not have the ability to transfer these skills to real-world situations have become the focus of our national educational reform agenda. In order to deal with these concerns, educators and psychologists have been researching various methods of both improving student learning and assessing student performance.

In order to acquire accurate and useful information concerning student performance, teachers are turning away from traditional summative evaluation methods toward a formative method of assessment. This method of assessment is variously known as *authentic assessment, alternative assessment,* and *performance-based assessment.* These terms are often used interchangeably, however they are not the same. According to Marzano, Pickering, & McTighe (1993) authentic assessment, popularized by Grant Wiggins (1989), conveys the idea that assessment should engage students in applying knowledge and skills in the same way they are used in the 'real world' outside of school (p.13). Alternative assessment applies to the variety of assessments that differ from the multiple-choice, timed, one-shot approaches characterized by most traditional standardized and classroom evaluation methods. Finally, performance-based assessment, according to Marzano, Pickering, & McTighe (1993) is a broad term, encompassing many of the characteristics of both authentic assessment and alternative assessment (p.13). Regardless of which definition is used, formative assessment methods require the assessor to employ heightened observational skills to gather careful and descriptive assessment data on student performance.

Observation is an important method of data gathering in authentic assessment, just as it is in qualitative research. The process of data gathering for the sake of scientific research has been traditionally thought of as the job of a full-time professional researcher. Today, however, "... research is conducted by many people in many settings" (Marriam, 1995, p.1). Page and Thomas (1977) defined research as a "...systematic investigation to increase knowledge and/or understanding" (p.290). One method of systematic qualitative research, referred to as a case study, "is an intensive description and analysis of a phenomenon or social unit such as an individual, group, institution, or community" " (Marriam, 1995, p. 108). Similarly, during an authentic assessment process the classroom teacher is involved in intensive description and analysis of a student's performance. Classroom teachers use anecdotal records, checklists, logs, journals, portfolios and interviews as authentic assessment data gathering tactics in much the same way that qualitative researchers gather data in the field. In a case study methodology, for instance, the primary aim of the systematic investigation is to describe the observed situation "in depth, in detail, in context, and holistically" (Patton, 1987, p. 19). This is also the goal of a classroom teacher engaged in the authentic assessment process. Parelleling the teacher's role in the classroom with that of a qualitative researcher places a unique perspective on the traditional view of a classroom teacher. This unique perspective expands the definition of today's classroom teachers to that of a "teacher/researcher", involved in documenting and evaluating key observable educational situations. This, in turn, results in the creation of a broader, more genuine picture of student performance and offers more opportunities for the improvement of student learning.

The use of qualitative observational methodology is a key to increasing the effectiveness of the authentic assessment process. Through consistent and systematic classroom observation, the teacher is able to gain a deeper understanding of *how* a child learns as well as the end product of the learning experience. Just as in qualitative methodology, the "observer is the instrument" (Patton, 1987, p. 12) who carefully examines trends or patterns while emphasizing "the importance of the *meaning* of human behavior and the social-cultural context of social interaction" (et al., 1987, p.20). The integration of qualitative observational methods can provide teachers with a systematic pedagogical framework in which to improve the accuracy, validity, and reliability of the authentic assessment process.

This paper focuses on a systematic method of developing an authentic assessment instrument that incorporates a three phase process of what is to be assessed, how it is to be measured, and how to interpret verbal and non-verbal messages or data.

What is to be assessed?

Prior to the implementation of any form of assessment, a clear understanding of *what is to be assessed* is necessary. This includes a fundamental understanding of the purpose of the assessment process, the learner, and the subject matter to be taught.

If the primary purpose of the assessment is to "describe the extent to which students have attained particular knowledge and skills, your assessment should focus on the outcomes or product of student learning" (Herman, Aschbacher, Winters, 1992, p.23). "However, if your purpose is diagnosis and improvement, such as diagnosing a student's strengths and weaknesses, prescribing the most appropriate instructional programs, or identifying strategies students use well and those they need help with, you'll want an assessment that gives you information about the process as well as the outcome" (et al., 1992, p.23).

Understanding and recognizing the uniqueness of learners and their learning styles is an important step in the assessment process. The multiple intelligence theory, advanced by Howard Gardner (1983), espoused a shift in philosophy in which the assessor recognizes the learner's framework of intelligence based on a broad range of abilities. Fully exploring and supporting the potential of all learners has the potential to maximize the learning experience and establish a powerful sense of self-confidence for all learners.

Finally, a clear understanding of the subject matter is a necessary step in the assessment process. Without a clear understanding of the subject matter, determining important learning outcomes would be a difficult, if not impossible, task.

How is it to be measured?

One method of measuring student progress is through the use of a rubric. A rubric is a rule of procedure. "When the word is used in connection with assessment, a rubric is a scoring guide that differentiates...on an articulated scale..." (Jasmine, 1993. p.9). There are two kinds of rubrics, holistic and analytic. According to Jasmine (1993), a holistic rubric is used to measure the overall effect of a task and is qualitative in nature. An analytic rubric consists of score points assigned to various elements and is quantitative in nature. Determining clear and educationally sound learning outcomes is a major step in the assessment process. Well-constructed learning outcomes establish a strong foundation for prioritizing and creating a properly formulated rubric.

Setting criteria and standards of a rubric is a main component of authentic assessment. "Perhaps most important, scoring criteria make public what is being judged and, in many cases, the standards for acceptable performance. Thus, criteria communicate your goals and achievement standards" (Herman, Aschbacher, Winters, 1992, p.44).

Selecting the task to match the authentic assessment is also a crucial point in the assessment process. Aligning the assessment task with the intended outcomes should be done to ensure that the assessment can, in fact, measure the learning to take place. "When considering assessment tasks, your best choices are those you believe most closely target your instructional aims and allow your students to demonstrate their progress and capabilities" (Herman, Aschbacher, Winters, 1992, p.33). Herman, Aschbacher, Winters (1992) posed six questions to help educators choose good tasks:

- Does the task match specific instructional intentions?
- Does the task adequately represent the content and skills you expect students to attain?
- Does the task enable students to demonstrate their progress and capabilities?
- Does the assessment use authentic, real-world tasks?
- Does the task lend itself to an interdisciplinary approach?
- Can the task be structured to provide measures of several goals? (p.35-37)

Choosing an appropriate task must then be followed by describing the assessment task in a manner that is clear and documentable in order for others to replicate and/or interpret the finding. Finally, Herman, Aschbacher, Winters (1993) offer a set of criteria that help to ensure that the appropriate learning tasks lead to sound assessment. These criteria are:

- Do the tasks match the important outcome goals you have set for the students?
- Do they pose an enduring problem type, the type of problems and situations that students are likely to face repeatedly in school and their future lives?
- Are the tasks fair and free of bias?
- Will the tasks be credible to important constituencies?
- Will the tasks be meaningful and engaging to students so that they will be motivated to show their capabilities?
- Are the tasks instructionally related/teachable?
- Are the tasks feasible for implementation in your classroom or school in terms of space, equipment, time, costs, and so forth?. (p. 41-43)

How to interpret verbal & non-verbal messages or data.

The assessment process is a matter of the verification of student learning. In the authentic assessment process, students are engaged in authentic and meaningful tasks. According to Wiggins (1993), the assessment process is

authentic when we directly examine student performance on worthy intellectual tasks (p. 3) therefore, the reliance on sound first-hand observation of both verbal and non-verbal learning situations is a vital component in authentic assessment. Teachers involved in authentic assessment need to develop strong observational skills. Harp (1991) discusses observation as a powerful tool for the evaluation of students as they are engaged in the performance of *real world* tasks (p. 75).

First-hand observation provides an understanding of both the activity and the context in which the activity is performed. It allows the observer to make more reliable inferences concerning the performance activity. Better understanding and more reliable inferences are a direct result of the observer's ability to concentrate on worthy intellectual tasks in order to evaluate the performance activity more clearly.

The ability to interpret verbal and non-verbal messages accurately, validly, and reliably through the observation of learning situations requires particularly careful analysis and judgment on the part of the observer. "The validity and reliability of qualitative data depend to a great extent on the methodological skill, sensitivity, and training of the evaluator. Systematic and rigorous observation involves far more than just being present and looking around" (Patton, 1987, p. 8). The value of observational data is developed through the observer's descriptive documentation of the setting, the activities, and meaning of what was observed.

Critical Viewing

The teacher has always been a critic to some extent, but are teachers critical viewers as well? According to James Brown (1991), "The critic, and the critical viewer, must be grounded in two essential areas of this act of critical judgment: the area of facts (what is informational data) and the area of norms or standards (what ought to be criteria)" (p. 24). Thus, teachers are critical viewers by nature, but perhaps not by systematic process.

The process of critically viewing performances involving human action has not been adequately addressed through research. Perhaps this is because no critical viewing model exists to guide teachers in systematically assessing their students. Traditionally, critical viewing has involved the interpretation of verbal and non-verbal information involving some form of media such as movies, photographs or television. As Ploghoft and Anderson (1982) stated, "individuals trained in critical viewing skills will be equipped with criteria for evaluating intention, motives, and audience response (students), for assigning value or worth to the message" (p. 5). This paper attempts to provide a critical viewing model for education by providing teachers with a systematic three phase process for the development of an authentic assessment instrument which includes a critical viewing component. However, before discussing the third phase that involves critical viewing for teacher/researchers, it is important to understand how and where critical viewing skills developed.

Critical reading skills evolved into critical viewing skills in order to better analyze electronically mediated messages. As John Long (1989) observed, "much of the groundwork for critical viewing was derived from work in critical reading. In critical reading, individuals learn procedures to extract and assimilate from the print media" (p. 12). Critical viewing follows a similar process but involves electronic media. As society and media became more sophisticated, the need to understand how information was interpreted through electronic media grew.

Several projects and studies were conducted to analyze and develop standard critical viewing skills for elementary, middle school, high school and adult students. The elementary project was conducted by the Southwest Educational Development Laboratory, WNET a public television station in New York published the middle school segment, the Far West Laboratory in San Francisco developed the high school study and Boston University's School of Public Communications developed the adult program. The project's goal was to assist individuals in monitoring their own viewing habits; in other words, to teach people to view television from a perspective other than that of the medium.

There have been many different sets of skills developed for various mediated situations and targeted at certain age levels. For example, the Southwest Educational Development Laboratory defined critical viewing skills as the ability to distinguish program elements, make judicious use of viewing time, understand the psychological implications of advertising, distinguish fact from fiction, recognize and appreciate differing views, understand content of dramatic presentation, understand style of dramatic presentation and understand the relationship between television and the printed word (Brown, 1991, p.96). Although a general standard of critical viewing skills is difficult to identify, the majority of projects and studies share the concept that people must not be passive consumers of information because they lose the ability to understand the world from varied perspectives. Adams & Hamm (1988) observed, "Intelligent consumers of video information need to be able to sort out the meaningful from the trivial" (p. 82). An increased level of critical awareness has the potential to move the viewer from passive information processing to active information processing. This is true of any viewing situation, be it mediated or live. In the age of information, how one views life can help or

hinder understanding reality. Thus, critical viewing is more than understanding mediated messages. It is understanding all types of messages from mediated to live. As Adams & Hamm stated, "Effective viewing of real world images requires a critical sense for both information and shades of meaning" (1988, p. 82).

Critical Viewing in an Educational Setting

Critical viewing of student performance is the next step in the evolution of critical viewing skills. The general framework consists of "the principles of intervention, goal attainment, cultural understanding, and literacy" (Long, 1989, p. 13). Intervention involves understanding the process of perception and may be altered through self-regulatory skills. This is a major step because it is at this level that the viewer stops being a passive viewer and becomes an active viewer. The active viewer begins to understand how his/her own internal perceptions and biases are developed. Individuals bring a set of beliefs to every situation. Discovering how to separate one's own perception from the visual messages in a situation is the key to becoming a critical viewer. An example of this is a teacher using a rubric to assess a child's performance. In order to incorporate critical viewing into the assessment, the teacher must use intervention to understand how his/her internal perspectives may affect the assessment. For instance, if a teacher is tired or has had difficulty with a particular child in the past, a skewed perspective of the child's ability may occur. This skewed perspective may in turn alter the assessment process.

The next step in the process of becoming a critical viewer is goal attainment. Goal attainment involves monitoring and understanding one's own reasons for attending to the learning situation as well as recognizing the student's own (and possibly different) rationale for participation. In other words, the viewer and the student performing the learning activity each have a set of goals. These goals do not necessarily refer to learning activity goals but refer to the personal goals of the teacher and of the student at the time of assessment. The teacher may want the student to complete the activity in a certain way and the student may want to just get through the task. It is the responsibility of the critical viewer to understand his/her personal goals as well as the goals of the person being assessed. By accomplishing this, the critical viewer can ensure that the goals of the learning activity are mutually understood and that the evaluation of the students' performance is not adversely affected by a clash of personal goals.

The third step in the critical viewing process is cultural understanding. Cultural understanding is knowing where the learning situation exists within the social schema. It is the opposite of the intervention step because the viewer now focuses on external awareness of the perceptions and biases of the individuals being assessed. For example, students' race, religion, gender, etc. play a large role in their perception of any learning situation. The students' perceptions and biases will be likely to affect their performances and thus adversely alter the assessment unless the teacher/viewer incorporates cultural context into the assessment situation.

The final step in the critical viewing process is literacy. Literacy is understanding the overall grammar of the learning situation, such as body language or actions of the learner in the course of an activity (physical, behavioral, and/or cognitive). It is at this step in the process that the viewer can take all of the knowledge gained from the first three steps of the critical viewing process and actually interpret what is seen during the learning activity. For example, the body language, vocal tone and verbal usage of a diabetic child with low blood sugar will appear as a normal child behaving poorly. A trained and well-prepared teacher critically viewing the learning situation will assess the whole child within the learning context. A teacher passively viewing the situation might assess the child incorrectly by not being aware of perceptions and biases, personal and other goals, external awareness of others' perceptions and biases, and the literacy of how to communicate.

The four steps to critical viewing skills create skilled observers who are trained and prepared for authentic assessment. Critical viewing adds an important component to the authentic assessment process, filling in valuable contextual information about performance, thus creating a more valid and reliable assessment.

Pre-Assessment Focusing Session

A well-trained and prepared critical viewer recognizes the need for intense focus and concentration in the observation process. Prior to entering an observational situation for the purposes of assessment, a classroom teacher must set aside time to mentally prepare for the complex exercise of interpreting the verbal and non-verbal messages in a student's performance. This process is referred to in this paper as a *pre-assessment focusing session*. A pre-assessment focusing session utilizes the four steps of critical viewing and is intended to focus a teacher/researcher's critical viewing skills in order to filter out personal perceptions or biases that could be present during an assessment situation. This

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process involves little time commentment but such focused preparation is essential for effective critical viewing and assessment. Once a teacher/researcher becomes familar with the steps of critical viewing the pre-assessment focusing session should become an integral part of the assessment process.

Summary

What is taught, *how* it is taught, and *how* it is assessed are critical issues within the educational community. The three phases discussed in this paper integrate the major steps involved in the development of a sound authentic assessment instrument.

The first phase addresses the need to carefully formulate a clear understanding of *What is to be assessed?* This includes the identification of the purpose of the assessment, recognizing the uniqueness of the learners, and possessing a knowledge base in the relevant subject matter.

The second phase looks closely at *How is it to be measured?* Determining appropriate learning outcomes will drive the instructional and assessment processes, therefore the formulation of the learning outcomes and the criteria and standards that will be applied to them are critical components. This leads directly to the selection of a suitable assessment task. The assessment task is an essential component of authentic assessment and is not only important from the stand point of validation of student learning but is vital for the students themselves to understand the expectations of the learning task. Ralph Tyler (1949), father of modern evaluation, commented that without an understanding of what a learner is supposed to know or how it is to be expressed, makes determining whether or not learning has actually occurred very difficult.

The third phase describes *how to interpret verbal and non-verbal messages or data* in the observational process of authentic assessment Goodman stated, "teachers are constant kid watchers" (1986, p.41). As such, classroom teachers need to be trained and well-prepared observers of all activities throughout the school day. Teachers must remain focused and objective just as qualitative researchers in scientific fields do. Trained and well-prepared classroom teachers become more astute observers of the underlying meaning and social context of student behavior, thus creating the potential for improved quality of their findings and ultimately of their assessment procedures.

Since teacher preparation is essential for accurate interpretation of verbal and non-verbal messages, the inclusion of a brief pre-assessment focusing session prior to an observational assessment will positively impact the assessment process. This focusing session sharpens a teacher's concentration and heightens the teacher's awareness of personal interventions, goals, the cultural context, and literacy issues that may interfere with, contaminate or unfairly influence the assessment process.

The integration of the three phases process described in this paper into the authentic assessment process provides the classroom teacher with a systematic method of developing an effective assessment instrument. Processing information through the first, second and the third phases gives a classroom teacher a sense of confidence in the development of their own authentic assessment instrument as well as their observational skills.

As classroom teachers strengthen their observational skills and begin to recognize their roles as *teacher-researchers* involved in important qualitative educational research, hidden benefits are likely to be discovered. The impact of these hidden benefits will be seen on two levels. On one level, the classroom teacher will experience an increase in confidence and professionalism. On another level, there will be direct positive effect on daily instructional and social classroom activities. The significance of these powerful hidden benefits will, by their very nature, have a positive impact on teachers' creativity and on their overall effectiveness in the instructional and assessment process.

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